

REMARKS

Claims 1-3, 5-8 and 16-27 are currently pending. Claims 4 and 9-15 have been canceled, claims 1-3, 5, 7-8 and 16-20 have been amended, and claims 21-27 have been newly added.

PRIOR ART REJECTION

Claims 1-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Brown et al. (U.S. Pat. No. 6,208,965).

Claims 1 and 16 are independent claims. Another independent claim, claim 9 has been canceled. Claim 1 as amended recites a method for recognizing speech which comprises, *inter alia*, performing a first comparison and performing a second comparison. Performing the first comparison comprises selecting an N number of characters from the spoken character string; comparing N times each character of the N number of characters to each pattern character string; determining an exact match between one or more characters of the N number of characters and one or more characters of each of pattern character strings; and calculating a first match probability of each of the pattern character strings based on a number of hits that exactly matches one or more of the N number of characters of the spoken character string. Performing the second comparison recites comparing an M number of spoken characters to remaining characters in each of the selected group of pattern character strings. Claim 1 as amended further recites calculating a second match probability of each of the selected group of pattern character strings and identifying a pattern character string having a highest second match probability representative of a recognized spoken character string.

Claim 16 as amended recites a sound recognition system which comprises a comparator for comparing a sound character string to pattern character strings and a controller which takes a result of a first and a second comparisons from the comparator

and calculates a first match probability based on the first comparison and a second match probability based on the first and the second comparisons.

Brown discloses a method and apparatus for recognizing an input identifier on the basis of a set of comparison identifiers (Abstract). After a user provides the input identifier according to a first form, a recognized identifier based on the input identifier is provided and a plurality of comparison identifiers is generated on the basis of the recognized identifier. *Id.* The user is then prompted to provide the input identifier again, but this time according to a second form that is different from the first form. *Id.* A second recognized identifier is then generated on the basis of the input identifier provided according to the second form. *Id.* If a match exists between the second recognized identifier and one of the comparison identifiers, the matched comparison identifier is selected as corresponding to the input identifier. *Id.*

Brown does not teach the recited features of claim 1, e.g., comparing N times each character of the N number of hits to each of the pattern character strings stored in a memory, determining an exact match, calculating a first match probability of each of the pattern character strings based on a number of hits that exactly matches one or more of the N number of characters of the spoken character string, calculating the second match probability of each of the pattern character strings of the selected group of pattern character strings based on a total number of hits that exactly matches one or more of the N number of characters and one or more of the M number of characters of the spoken character string.

In addition, Brown does not teach the recited features of claim 16, e.g., "during a first comparison, the comparator selecting an N number of characters from the sound character string and comparing the N number of characters to each of the pattern character strings N times, and during a second comparison, the comparator comparing remaining characters of the sound character string to remaining characters of the each pattern character string M times where the remaining characters of both the sound character string and the each pattern character string are not compared during the first comparison" and the controller "which takes a result of the first and the second

comparisons from the comparator and calculates a first match probability based on the first comparison and a second match probability based on the first and the second comparisons."

Instead, Brown teaches a confusion matrix which stores a plurality of recognition probabilities arranged in matrix form. Col. 5, lines 12-13. In Brown, each recognition probability represents the probability that a particular letter spoken by a user into voice input/output device will be recognized by recognizer either as the same letter or as another letter. Col. 5, lines 16-19. In other words, when "A" is spoken into device, the recognizer produces the letter "A" with 50% probability, the letter "F" with 5% probability, and the letter "H" with 5% probability. Col. 5, lines 33-58. Thus, Brown does not teach the first comparison which results in selecting a group of pattern character strings based on the first match probability and the second comparison which results in identifying a resultant pattern character string based on the second match probability, as recited in claims 1 and 16. At least for the reasons above, Brown does not teach all of features of claims 1 and 16.

Claims 2-8 and 17-20 depend from claims 1 and 16. Brown does not teach all of features of claims 1 and 16. At least for that reason, Brown does not teach the recited features of claims 2-8 and 17-20.

Reconsideration and allowance of claims 1-8 and 16-20 are respectfully requested.

NEW CLAIMS

Claims 21-27 are newly added. Claims 21-27 are patentable at least for the reasons that Brown does not teach the features, *inter alia*, "performing a first comparison which compares the input of the spoken character string to a set of pattern character strings and reduces the set of pattern character strings to a group of qualifying pattern character strings having a match probability that exceeds a predetermined threshold where the first comparison comprises comparing a portion of the spoken character string with the portion of each pattern character string and

determining a number of hits between the spoken character string and the each pattern character string"; and "performing a second comparison which identifies a resultant pattern character string representative of a recognition of the spoken character string, where the second comparison comprises comparing a part of, or an entire remaining characters of the spoken character string to each pattern character string of the group of qualifying pattern character strings and determining a total number of hits between the spoken character string and one or more characters of the group of qualifying pattern character strings." Consideration and allowance of claims 21-27 are respectfully requested.

CONCLUSION

For all of the above reasons, Applicants respectfully request reconsideration and allowance of the present application. The Examiner is invited to contact the undersigned attorney at the below-listed number if there are any outstanding issues that could be resolved through a telephone conference.

Respectfully submitted,

/Miyoung Shin/
Miyoung Shin (L0249)
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200